

SEQUENCE LISTING

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<120> Linear Gamma-Carboxyglutamate Rich Conotoxins

<130> 2314-224-II

<150> US 60/273,639

<151> 2001-03-07

<160> 196

<170> PatentIn version 3.0

<210> 1

<211> 24

<212> PRT

<213> Conus ammiralis

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa at residue 1 is Gln or pygro-Glu; Xaa at residues 7, 8 and 9
 is Glu or gamma-carboxy-Glu; Xaa at residues 13 and 16 is Lys, no
 r-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 1

Xaa	Gly	Gln	Asp	Asp	Ser	Xaa	Xaa	Xaa	Asp	Ser	Gln	Xaa	Val	Met	Xaa
1				5				10					15		

His	Gly	Gln	Arg	Arg	Glu	Arg	Arg
				20			

<210> 2

<211> 17

<212> PRT

<213> Conus betulinus

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 2

Gly	Gly	Xaa	Xaa	Val	Arg	Xaa	Ser	Ala	Xaa	Thr	Leu	His	Xaa	Leu	Thr
1				5				10					15		

Xaa

<210> 3

<211> 17

<212> PRT
 <213> Conus betulinus

<220>
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 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 3
 Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Xaa

<210> 4
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 4
 Asp Gly Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu Asn Xaa Leu Thr
 1 5 10 15

Xaa

<210> 5
 <211> 18
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-G
 lu

<400> 5
 Gly Tyr Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Xaa
 1 5 10 15

Xaa Ala

<210> 6
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; Xaa
 at residue 17 is Pro or hydroxy-Pro

<400> 6

Gly Gly Gly Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Xaa

<210> 7

<211> 18

<212> PRT

<213> Conus bullatus

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residue 2 is Pro or hydroxy-Pro; Xaa at residues 3, 7, 10,
 14, 16 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 5 is T
 yr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho
 -Tyr or nitro-Tyr

<400> 7

Asn Xaa Xaa Thr Xaa Ile Xaa Ile Val Xaa Ile Ser Arg Xaa Leu Xaa
 1 5 10 15

Xaa Ile

<210> 8

<211> 20

<212> PRT

<213> Conus bullatus

<220>

<221> PEPTIDE

<222> (1)..(20)

<223> Xaa at residue 2 is Pro or hydroxy-Pro; Xaa at residues 3, 6, 9,
 12, 16, 18 and 19 is Glu or gamma-carboxy-Glu; Xaa at residue 5 i
 s Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phos
 pho-Tyr or nitro-Tyr

<400> 8

Asn Xaa Xaa Thr Xaa Xaa Asn Leu Xaa Leu Val Xaa Ile Ser Arg Xaa
 1 5 10 15

Leu Xaa Xaa Ile
 20

<210> 9

<211> 19

<212> PRT

<213> Conus catus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Gl
 u

<400> 9

Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asn

<210> 10
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 10
 Gly Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asp

<210> 11
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 11
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Pro
 1 5 10 15

Xaa Arg Asn

<210> 12
 <211> 17
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 12
 Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Thr Ala Arg Xaa Arg Asp
 1 5 10 15

Ser

<210> 13
 <211> 17
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 13

Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Ala Ala Arg Xaa Arg Asp
1 5 10 15

Ser

<210> 14

<211> 29

<212> PRT

<213> Conus catus

<220>

<221> PEPTIDE

<222> (1)..(29)

<223> Xaa at residues 2, 4, 10 and 16 is Glu or gamma-carboxy-Glu; Xaa at residues 3, 9, 25 and 28 is Pro or hydroxy-Pro; Xaa at residue 26 is Trp (D or L) or halo-Trp (D or L)

<220>

<221> PEPTIDE

<222> (1)..(29)

<223> Xaa at residue 29 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 14

Gly Xaa Xaa Xaa Val Gly Ser Ile Xaa Xaa Ala Val Arg Gln Gln Xaa
1 5 10 15

Cys Ile Arg Asn Asn Asn Asn Arg Xaa Xaa Cys Xaa Xaa
20 25

<210> 15

<211> 17

<212> PRT

<213> Conus distans

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residues 5, 6, 8 and 12 is Glu or gamma-carboxy-Glu

<400> 15

Thr Ile Thr Ala Xaa Xaa Ala Xaa Arg Thr Ser Xaa Arg Met Ser Ser
1 5 10 15

Met

<210> 16

<211> 19

<212> PRT

<213> Conus distans

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 2, 7, 8, 10 and 14 is Glu or gamma-carboxy-Glu; Xaa at residues 4 and 6 is Pr

o or hydroxy-Pro

<400> 16

Xaa Xaa Thr Xaa Thr Xaa Xaa Xaa Val Xaa Arg His Thr Xaa Arg Leu
1 5 10 15
Lys Ser Met

<210> 17

<211> 15

<212> PRT

<213> Conus episcopatus

<220>

<221> PEPTIDE

<222> (1)..(15)

<223> Xaa at residues 7, 11 and 13 is Glu or gamma-carboxy-Glu; Xaa at residue 14 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 17

Gly Gly Lys Asp Ile Val Xaa Thr Ile Thr Xaa Leu Xaa Xaa Ile
1 5 10 15

<210> 18

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 2, 3, 4, 7, 11 and 15 is Glu or gamma-carboxy-Glu

<400> 18

Gly Xaa Xaa Xaa Val Ala Xaa Met Ala Ala Xaa Ile Ala Arg Xaa Asn
1 5 10 15

Gln Ala Asn

<210> 19

<211> 18

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr Xaa at residues 3, 7, 10, 14 and 17 is Glu or gamma-carboxy-Glu

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residue 16 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 19

Ser Xaa Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Xaa

1

5

10

15

Xaa Arg

<210> 20

<211> 34

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(34)

<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr Xaa at residues 3, 7, 10, 14 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 28 is Pro or hydroxy-Pro

<220>

<221> PEPTIDE

<222> (1)..(34)

<223> Xaa at residues 16, 20 and 21 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 20

Ser	Xaa	Xaa	Gln	Ala	Arg	Xaa	Val	Gln	Xaa	Ala	Val	Asn	Xaa	Leu	Xaa
1				5				10						15	

Xaa	Arg	Gly	Xaa	Xaa	Ile	Ile	Met	Leu	Gly	Val	Xaa	Arg	Asp	Thr	Arg
			20				25						30		

Gln Phe

<210> 21

<211> 17

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu

<400> 21

Xaa	Xaa	Asp	Asp	Arg	Xaa	Ile	Ala	Xaa	Thr	Val	Arg	Xaa	Leu	Xaa	Xaa
1				5					10					15	

Ile

<210> 22

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 5, 6, 9, 12 and 16 is Glu or gamma-carboxy-Glu

<400> 22

Gly Asn Thr Ala Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu His Xaa
1 5 10 15

Leu Ser Leu

<210> 23

<211> 23

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(23)

<223> Xaa at residues 8, 12, 15, 19 and 22 is Glu or gamma-carboxy-Glu

<400> 23

Gly Ser Ile Ser Met Gly Phe Xaa His Arg Arg Xaa Ile Ala Xaa Leu
1 5 10 15

Val Arg Xaa Leu Ala Xaa Ile
20

<210> 24

<211> 19

<212> PRT

<213> Conus lynceus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 2, 3, 4, 7, 11 and 15 is Glu or gamma-carboxy-Glu

<400> 24

Gly Xaa Xaa Xaa Val Ala Xaa Met Ala Ala Xaa Ile Ala Arg Xaa Asn
1 5 10 15

Ala Ala Asn

<210> 25

<211> 18

<212> PRT

<213> Conus lynceus

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residue 2 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys; Xaa at residues 3, 4, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu

<400> 25

Gly Xaa Xaa Xaa Asp Arg Xaa Ile Val Xaa Thr Val Arg Xaa Leu Xaa
1 5 10 15

Xaa Ile

<210> 26

<211> 19

<212> PRT
 <213> Conus lynceus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 2, 3, 4, 7, 11, 15 and 16 is Glu or gamma-carboxy-Glu; Xaa at residue 19 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 26
 Gly Xaa Xaa Xaa Val Ala Xaa Met Ala Ala Xaa Leu Thr Arg Xaa Xaa
 1 5 10 15

Ala Val Xaa

<210> 27
 <211> 24
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu; Xaa at residues 7 and 19 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 27
 Gly Xaa Xaa Xaa His Ser Xaa Xaa Gln Xaa Cys Leu Arg Xaa Val Arg
 1 5 10 15
 Val Asn Xaa Val Gln Gln Xaa Cys
 20

<210> 28
 <211> 24
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu; Xaa at residues 7 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 28
 Gly Xaa Xaa Xaa His Ser Xaa Xaa Gln Xaa Cys Leu Arg Xaa Val Arg

1 5 10 15

Val Asn Asn Val Gln Gln Xaa Cys
20

<210> 29
<211> 24
<212> PRT
<213> Conus purpurascens
<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
u; Xaa at residues 7 and 19 is Lys, nor-Lys, N-methyl-Lys, N,N-di
methyl-Lys or N,N,N-trimethyl-Lys

<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-
sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 29
Gly Xaa Xaa Xaa His Ser Xaa Xaa Gln Xaa Cys Leu Arg Xaa Ile Arg
1 5 10 15

Val Asn Xaa Val Gln Gln Xaa Cys
20

<210> 30
<211> 24
<212> PRT
<213> Conus purpurascens
<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residues 2, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
Xaa at residues 19 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Ly
s or N,N,N-trimethyl-Lys

<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residue 6 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-
sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 30
Gly Xaa Ala Xaa His Xaa Ala Phe Gln Xaa Cys Leu Arg Xaa Ile Asn
1 5 10 15

Val Asn Xaa Val Gln Gln Xaa Cys
20

<210> 31
<211> 15
<212> PRT
<213> Conus purpurascens

<220>

<221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 4, 7, 10, 13 and 14 is Glu or gamma-carboxy-Glu
 u

<400> 31
 Gly Leu Xaa Xaa Asp Ile Xaa Phe Ile Xaa Thr Ile Xaa Xaa Ile
 1 5 10 15

<210> 32
 <211> 15
 <212> PRT
 <213> Conus stercusmuscarum

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 7, 13 and 14 is Glu or gamma-carboxy-Glu; Xaa
 at residue 11 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or
 N,N,N-trimethyl-Lys

<400> 32
 Ile Thr Xaa Thr Asp Ile Xaa Leu Val Met Xaa Leu Xaa Xaa Ile
 1 5 10 15

<210> 33
 <211> 20
 <212> PRT
 <213> Conus aurisiacus

<220>
 <221> PEPTIDE
 <222> (1)..(20)
 <223> Xaa at residues 2, 4, 11 and 15 is Glu or gamma-carboxy-Glu; Xaa
 at residue 20 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or
 N,N,N-trimethyl-Lys

<400> 33
 Gly Xaa Asp Xaa Val Ser Gln Met Ser Xaa Xaa Ile Leu Arg Xaa Leu
 1 5 10 15

Glu Leu Gln Xaa
 20

<210> 34
 <211> 31
 <212> DNA
 <213> Artificial

<220>
 <223> oligonucleotide primer

<400> 34
 caggatcctg tatctgctgg tgcccctggt g

31

<210> 35
 <211> 23
 <212> DNA
 <213> Artificial

<220>
 <223> oligonucleotide primer

<400> 35
 aagctcgagt aacaacgcag agt 23

<210> 36
 <211> 432
 <212> DNA
 <213> Conus catus

<400> 36
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtgacctt ccacctaatc 60
 ctaggcacgg gcacactaga tcatggaggc gcaactgactg aacgccgttc gggtagcgcc 120
 acagcgctga gacctgagcc tgtcctcctg cagaaatccg ctgcccgag caccgacgac 180
 agtggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacggct 240
 aaaagcgacg aagagctact acgagaggat gtagagactg ttttagaact cgaaaggaat 300
 ggaaaaagat aatcaagctg agtgttccac gtgacactcg tcagttctaa agtccccaga 360
 taaatcgttc cctatcttgc cacattcttt ctttctcttt tcattttaatt ccccaaattc 420
 ttcattgttta tt 432

<210> 37
 <211> 102
 <212> PRT
 <213> Conus catus

<400> 37
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Ser Gly Asp Ala Thr Ala Leu Arg Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Ser Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Lys
 65 70 75 80
 Ser Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
 85 90 95
 Glu Arg Asn Gly Lys Arg
 100

<210> 38
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 38
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asn

<210> 39
 <211> 432
 <212> DNA
 <213> Conus catus

<400> 39
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tgggtgacctt ccacctaatac 60
 ctaggcacgg gcacactaga tcatggaggc gcaactgactg aacgccgttc ggggtgacgcc 120
 acagcgctga gacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 agtggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacggct 240
 aaaggcgacg aagagctact acgagaggat gtagagactg ttttagaact cgaaagggat 300
 ggaaaaagat aatcaagctg agtgttccac gtggcactcg tcagttctaa agtccccaga 360
 taaatcggtc cctatcttgc cacattcttt ctttctcttt tcattttaatt ccccaaattct 420
 ttcatgttta tt 432

<210> 40
 <211> 102
 <212> PRT
 <213> Conus catus

<400> 40
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Ser Gly Asp Ala Thr Ala Leu Arg Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Ser Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Lys
 65 70 75 80
 Gly Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
 85 90 95
 Glu Arg Asp Gly Lys Arg
 100

<210> 41
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 41
 Gly Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asp

<210> 42
 <211> 432
 <212> DNA
 <213> Conus catus

<400> 42
 gcgatgcaac tgtacacgta tctgtatctg ctggcgcccc tggtgacctt ccacctaatac 60
 ctaggcacgg gcacactaga tcatggaggc gcaactgactg aacgccgttc ggggtgacgcc 120
 acagcgctga gacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 agtggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacggct 240
 aaaagcgacg aagagctact acgagaggat gtagagactg ttttagaacc cgaaaggaat 300
 ggaaaaagat aatcaagctg agtggtccac gtgacactcg tcagttctaa agtccccaga 360
 taaatcggtc cctattttgc cacattcttt ctttctcttt tcattttaatt ccccaaattct 420
 ttcattgttta tt 432

<210> 43
 <211> 102
 <212> PRT
 <213> Conus catus

<400> 43
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Ala Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Ser Gly Asp Ala Thr Ala Leu Arg Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Ser Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Lys
 65 70 75 80

Ser Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Pro
 85 90 95

Glu Arg Asn Gly Lys Arg
 100

<210> 44
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu;
 Xaa at residue 16 is Pro or hydroxy-Pro

<400> 44
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Xaa
 1 5 10 15

Xaa Arg Asn

<210> 45
 <211> 427
 <212> DNA
 <213> Conus catus

<400> 45
 gcgatgcaac tgtacacgta tctgtatctg ctggtgtccc tggtagacctt ccacctaatac 60
 ctaggcacgg gcacactaga tcatggaggc gcaactgactg aacgccgttt ggctgacgcc 120
 acagcgctgg aagctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacaac 180
 aatggcaagg acaggctcgac tcagatgagg aggattctca aaaagcaagg aaacacgggt 240
 agaatcgagg aaggtctgat agaggatctg gagaccgcta gagaacgcga cagtggaaaa 300
 agataatcaa gctgagtggt ccacgtgaca ctcatcagtt ctaaagtccc cagataaatc 360
 gttccctatt ttggccacat tctttcttcc tcttttcgtt taattcccca aatctttcat 420
 gtttatt 427

<210> 46
 <211> 100
 <212> PRT
 <213> Conus catus

<400> 46
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Val Ser Leu Val Thr Phe
 1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Glu Ala Glu Pro Val Leu
 35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asn Asn Gly Lys Asp Arg
 50 55 60

Ser Thr Gln Met Arg Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Arg
 65 70 75 80

Ile Glu Glu Gly Leu Ile Glu Asp Leu Glu Thr Ala Arg Glu Arg Asp
 85 90 95

Ser Gly Lys Arg
 100

<210> 47

<211> 17

<212> PRT

<213> Conus catus

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 47

Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Thr Ala Arg Xaa Arg Asp
 1 5 10 15

Ser

<210> 48

<211> 427

<212> DNA

<213> Conus catus

<400> 48

gcgatgcaac tgtacacgta tctgtatctg ctggtgtccc tggtagacctt ccacctaatc 60

ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttt ggctgacgcc 120

acagcgctgg aagctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacaac 180

aatggcaagg acaggtcgac tcagatgagg aggattctca aaaagcaagg aaacacggct 240

agaatcgagg aaggtctgat agaggatctg gaggctgcta gagaacgcga cagtggaaaa 300

agataatcaa gctgagtgtt ccacgtgaca ctcatcagtt ctaaagtccc cagataaatc 360

gttccctatt ttgcccacat tctttcttcc tcttttcgtt taattcccca aatctttcat 420

gtttatt 427

<210> 49

<211> 100

<212> PRT

<213> Conus catus

<400> 49

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Ser Leu Val Thr Phe
 1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Glu Ala Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asn Asn Gly Lys Asp Arg
50 55 60

Ser Thr Gln Met Arg Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Arg
65 70 75 80

Ile Glu Glu Gly Leu Ile Glu Asp Leu Glu Ala Ala Arg Glu Arg Asp
_lain 85 90 95

Ser Gly Lys Arg
100

<210> 50

<211> 17

<212> PRT

<213> Conus catus

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 50

Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Ala Ala Arg Xaa Arg Asp
1 5 10 15

Ser

<210> 51

<211> 433

<212> DNA

<213> Conus catus

<400> 51

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60

ctaggcacgg gcacactaga tcatggaggc gcaactgaactg aacgccgttc ggctgacgcc 120

acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180

aatggcaaag acaggttgac tcacatgaag aggattotca aaaaacgagc aaacaaagcc 240

agaggcgaac cagaagttgg aagcataccg gaggcagtaa gacaacaaga atgtataaga 300

aataataata atcgaccttg gtgtcccaag tgacactcgt cagttctaaa gtctccagat 360

agatcgttcc ctatcttttg cactctctt cttctctctt tcatttaagt tcccaaatac 420

tttcatgttt att 433

<210> 52

<211> 107

<212> PRT

<213> Conus catus

<400> 52

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30

Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60

Leu Thr His Met Lys Arg Ile Leu Lys Lys Arg Ala Asn Lys Arg Glu
 65 70 75 80

Pro Glu Val Gly Ser Ile Pro Glu Ala Val Arg Gln Gln Glu Cys Ile
 85 90 95

Arg Asn Asn Asn Asn Arg Pro Trp Cys Pro Lys
 100 105

<210> 53

<211> 29

<212> PRT

<213> Conus catus

<220>

<221> PEPTIDE

<222> (1)..(29)

<223> Xaa at residues 2, 4, 10 and 16 is Glu or gamma-carboxy-Glu; Xaa
 at residues 3, 9, 25 and 28 is Pro or hydroxy-Pro; Xaa at residue
 26 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O
 -phospho-Tyr or nitro-Tyr

<400> 53

Gly Xaa Xaa Xaa Val Gly Ser Ile Xaa Xaa Ala Val Arg Gln Gln Xaa
 1 5 10 15

Cys Ile Arg Asn Asn Asn Asn Arg Xaa Xaa Cys Xaa Lys
 20 25

<210> 54

<211> 430

<212> DNA

<213> Conus bullatus

<400> 54

gcgatgcaac tgtacacgta tctgtatctg ctggtgccct tggtagcctt ccacctaatt 60
 ctgggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc ggctgacgcc 120
 acagcactga aacctgagcc tgctctcctg cagaaaaccg ctgcccgcag caccgacgac 180
 aatggcaaga agaggctgac tcagaggaag aggattctca aaaagcgagg aaacacggct 240
 agaaaccccc aaacttatat agagattgtg gagatttcta gggaactcga agagattgga 300
 aaaagataat caagctgggt gttccacgtg aactcgtca gttctgaagt cccgaggtag 360

atcgttccct atttttgccca cactcttttct ttctctttttc atttaattcc ccaaattcttt 420

catgtttatt 430

<210> 55

<211> 101

<212> PRT

<213> Conus bullatus

<400> 55

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Thr Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Lys Arg
50 55 60

Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg
65 70 75 80

Asn Pro Glu Thr Tyr Ile Glu Ile Val Glu Ile Ser Arg Glu Leu Glu
85 90 95

Glu Ile Gly Lys Arg
100

<210> 56

<211> 18

<212> PRT

<213> Conus bullatus

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residue 1 is Pro or hydroxy-Pro; Xaa at residues 3, 5, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 5 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 56

Asn Xaa Xaa Thr Xaa Ile Xaa Ile Val Xaa Ile Ser Arg Xaa Leu Xaa
1 5 10 15

Xaa Ile

<210> 57

<211> 435

<212> DNA

<213> Conus bullatus

<400> 57

gcgatgcaac tgtacacgta tctgtatttg ctggtgccct tggtagacctt ccacctaattc 60

ctgggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc ggctgacgcc 120

acagcgctga aacctgagcc tgcctcctg cagaaaaccg ctgcccgcag caccgacgac 180
aatggcaaga agaggctgac tcagaggaag aggattctca aaaagcgagg aaacacggct 240
agaaacccccg aaacttatta taatttagag cttgtggaga tttctaggga actcgaagaa 300
attggaaaaa gataatcaag ctgggtgttc cacgtgacac tcgtcagttc ttaagtccccg 360
aggtagatcg ttccctatatt ttgccacact ctttctttct cttttcattt aattccccaa 420
actttcatgt ttatt 435

<210> 58

<211> 103

<212> PRT

<213> Conus bullatus

<400> 58

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Thr Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Lys Arg
50 55 60

Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg
65 70 75 80

Asn Pro Glu Thr Tyr Tyr Asn Leu Glu Leu Val Glu Ile Ser Arg Glu
85 90 95

Leu Glu Glu Ile Gly Lys Arg
100

<210> 59

<211> 20

<212> PRT

<213> Conus bullatus

<220>

<221> PEPTIDE

<222> (1)..(20)

<223> Xaa at residue 1 is Pro or hydroxy-Pro; Xaa at residues 3, 9, 12, 16, 18 and 19 is Glu or gamma-carboxy-Glu; Xaa at residues 5 and 6 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 59

Asn Xaa Xaa Thr Xaa Xaa Asn Leu Xaa Leu Val Xaa Ile Ser Arg Xaa
1 5 10 15

Leu Xaa Xaa Ile
20

<210> 60
 <211> 425
 <212> DNA
 <213> Conus betulinus

<400> 60
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggc gcactgactg aacgccgttt ggctgatgcc 120
 acagcgctga aacctgagcc tgtcctcctg cagaaatccg ccgcccgcag caccgacgac 180
 aatggcaagg acaggttgac tcagatgatc aggattctca aaaagcgagg aaacatggcc 240
 agaggcggcg aagaagttag agagtctgca gagactcttc atgaactcac gccgtaggaa 300
 aaagaaaaag attaatacaag ctgggtgtcc cacgtgacac tcgtcagttc taaagtcccc 360
 agtttctctat ctttgccacg tttctttttc ttttcattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 61
 <211> 95
 <212> PRT
 <213> Conus betulinus

<400> 61
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Gly
 65 70 75 80
 Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Leu Thr Pro
 85 90 95

<210> 62
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 62
 Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Leu Thr
 1 5 10 15

Xaa

<210> 63
 <211> 425
 <212> DNA
 <213> Conus betulinus

<400> 63
 gcgatgcaac tgtatacgtat tctgtatctg ctgggtgcgc tggtagacctt ctacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggc gcaactgactg aacgccgttt ggctgacgcc 120
 acagcgctga aacctgagcc tgcctcctg cagaaatcog ccgcccgcag cactgacgac 180
 aatggcaagg acaggttgac tcagatgatc aggattctca aaaagcgagg aaacatggcc 240
 agaggcggcg aagaagttag agagtctgca gagactcttc atgaaatcac gccgtaggaa 300
 aaagaaaaag attaatacaag ctgggtgttc cacgtgacac tcgccagttc taaagtcccc 360
 agtttcctat ctttgccagg tttctttctc ttttcattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 64
 <211> 95
 <212> PRT
 <213> Conus betulinus

<400> 64
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Gly
 65 70 75 80
 Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr Pro
 85 90 95

<210> 65
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 65

Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Xaa

<210> 66

<211> 425

<212> DNA

<213> Conus betulinus

<400> 66

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 ctaggcacgg gcacgctagg tcatggaggc gcaactgactg aacgccgttt ggctgacgcc 120
 acagcgctga aacctaagcc tctctctctg cagaaatccg ccgcccgcag cactgacgac 180
 aatggcaagg acaggttgac tcagatgatac aggtattctca aaaagcgagg aaacatgggc 240
 agagacggcg aagaagtcag agaggctgca gagactctta atgaactcac gccgtaggaa 300
 aaagaaaaag attaatcaag ctgggtgttc cacgtgacac tcgtcagttc taaagtaccc 360
 agtttcctat ctttgccacg tttctttttc tttccattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 67

<211> 97

<212> PRT

<213> Conus betulinus

<400> 67

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15

Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Lys Pro Ile Leu
 35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60

Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Gly Arg
 65 70 75 80

Asp Gly Glu Glu Val Arg Glu Ala Ala Glu Thr Leu Asn Glu Leu Thr
 85 90 95

Pro

<210> 68

<211> 17

<212> PRT

<213> Conus betulinus

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; Xaa at residue 17 is Pro or hydroxy-Pro

<400> 68

Asp Gly Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu Asn Xaa Leu Thr
1 5 10 15

Xaa

<210> 69

<211> 437

<212> DNA

<213> Conus betulinus

<400> 69

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatt 60
ctaggcacgg gcacgctagg tcatggaggc gcaactgactg aaagccgttc ggctgacgcc 120
acagcactga aaccagggcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
aatggcaagg acaggttgac tcagatgaag aggactctca aaaagcgagg aaacacggcc 240
agaggctacg aagatgatag agagattgca gagactgtta gagaactcga ggaagcagga 300
aaatgaaaaa gattaatcaa gctgggtggt ccacgtgaca cttgtcagtt ctaaagtccc 360
cagatagatc gttccctatt tttgccacat tctttttttc tcttttcatt taattcccca 420
aatctttcat gtttatt 437

<210> 70

<211> 98

<212> PRT

<213> Conus betulinus

<400> 70

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
20 25 30

Glu Ser Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Gly Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
50 55 60

Leu Thr Gln Met Lys Arg Thr Leu Lys Lys Arg Gly Asn Thr Arg Tyr
65 70 75 80

Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu Glu Ala
85 90 95

Gly Lys

<210> 71

<211> 18
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residue 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu

<400> 71
 Gly Xaa Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Xaa
 1 5 10 15

Xaa Ala

<210> 72
 <211> 425
 <212> DNA
 <213> Conus betulinus

<400> 72
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 ctaggcacgg gcacgctagg tcatggaggc gcactgactg aacgccgttt ggctgacgcc 120
 acagcgtga aacctgagcc tgtcctoctg cagaaatccg ccgccgcgag cactgacgac 180
 aatggcaagg acaggttgac tcagatgatc aggattctca aaaagcgagg aaacatggcc 240
 agaggcggcg gagaagttag agagtctgca gagactcttc atgaaatcac gccgtaggaa 300
 aaagaaaaag attaatacaag ctgggtgttc cactgacac tcgtcagttc taaagtcccc 360
 agtttcctat ctttgccagg tttctttctc ttttcattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 73
 <211> 95
 <212> PRT
 <213> Conus betulinus

<400> 73
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Gly
 65 70 75 80
 Gly Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr Pro

95

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<400> 74
Gly Gly Gly Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
1          5          10          15
Xaa
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<210> 76
<211> 85
<212> PRT
<213> Conus ammiralis
```

<400> 76															
Met	Gln	Leu	Tyr	Thr	Tyr	Leu	Cys	Leu	Leu	Val	Pro	Leu	Val	Thr	Phe
1				5					10					15	
Tyr	Leu	Ile	Leu	Gly	Thr	Gly	Thr	Leu	Ala	His	Gly	Gly	Ala	Leu	Thr
			20					25					30		
Glu	Arg	Arg	Leu	Ala	His	Ala	Arg	Val	Ile	Glu	Pro	Asp	Pro	Ala	Pro
		35					40					45			
Leu	Glu	Asn	Ser	Ala	Leu	Arg	Ser	Ile	Arg	Arg	Gln	Arg	Gln	Gly	Gln
	50					55					60				
Asp	Asp	Ser	Glu	Glu	Glu	Asp	Ser	Gln	Lys	Val	Met	Lys	His	Gly	Gln

65

70

75

80

Arg Arg Glu Arg Arg
85

<210> 77
<211> 24
<212> PRT
<213> Conus ammiralis

<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 7, 8, 9 and
22 is Glu or gamma-carboxy-Gl

<400> 77
Xaa Gly Gln Asp Asp Ser Xaa Xaa Xaa Asp Ser Gln Lys Val Met Lys
1 5 10 15

His Gly Gln Arg Arg Xaa Arg Arg
20

<210> 78
<211> 421
<212> DNA
<213> Conus episcopatus

<400> 78
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ctaggcacgg gcacactagc tcatggaggc gcactgactg aacatcggtc ggccgacgcc 120
acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
aacggcaagg acagggtgac tgggtggaag gggattotca aaaagcgagg aaacacggcc 240
agaggcgga aagatattgt ggagactatt acagaactcg aaaaaatagg aaaaaggtaa 300
tcaagctggg tgttccacgt gacactcatc agttctaaag tccccagata gatcgttccc 360
tatttttgcc atattctttc tttctctttt catgtaattc cccaaatctt tcatgtttat 420
t 421

<210> 79
<211> 96
<212> PRT
<213> Conus episcopatus

<400> 79
Met Gln Leu Tyr Tyr Tyr Leu Cys Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

Tyr Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Leu Thr
20 25 30

Glu His Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
50 55 60

Leu Thr Arg Trp Lys Gly Ile Leu Lys Lys Arg Gly Asn Thr Arg Gly
65 70 75 80

Lys Asp Ile Val Glu Thr Ile Thr Glu Leu Glu Lys Ile Gly Lys Arg
85 90 95

<210> 80
<211> 15
<212> PRT
<213> Conus episcopatus

<220>
<221> PEPTIDE
<222> (1)..(15)
<223> Xaa at residues 7, 11 and 13 is Glu or gamma-carboxy-Glu

<400> 80
Gly Gly Lys Asp Ile Val Xaa Thr Ile Thr Xaa Leu Xaa Lys Ile
1 5 10 15

<210> 81
<211> 433
<212> DNA
<213> Conus lynceus
<400> 81

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60
ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc gactgatgcc 120
atagcactga aacctgagcc tgtcctcctg cagaaatcct ctgccgcgag caccgacgat 180
aatggcaacg acaggttgac tcagatgaag aggatcctca aaaagcgagg aaacaaagcc 240
agaggcgaag aagaagttgc aaaaatggcg gcagagattg ccagagaaaa cgctgcaaata 300
gggaaatgat aatcaagttg ggtgttccac gtgacactcg tcagttctaa agtccccaga 360
tagatcggtc cctatttttg ccacattcctt tctttctctt ttcatttaata tccccaaatac 420
tttcatgttt att 433

<210> 82
<211> 99
<212> PRT
<213> Conus lynceus

<400> 82
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Ser Thr Asp Ala Ile Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ser Ala Arg Ser Thr Asp Asp Asn Gly Asn Asp Arg

50

55

60

Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu
 65 70 75 80

Glu Glu Val Ala Lys Met Ala Ala Glu Ile Ala Arg Glu Asn Ala Ala
 85 90 95

Asn Gly Lys

<210> 83

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 2, 3, 4, 11 and 15 is Glu or gamma-carboxy-Glu

<400> 83

Gly Xaa Xaa Xaa Val Ala Lys Met Ala Ala Xaa Ile Ala Arg Xaa Asn
 1 5 10 15

Ala Ala Asn

<210> 84

<211> 430

<212> DNA

<213> Conus lynceus

<400> 84

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggatgatctt ctacctaattc 60

ctaggcacgg gcacgctagg tcatggaggc aactgactg aacgccgttc ggctgatgcc 120

acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccggcgac 180

gatgccaaagg agaggttgac tcagacgaag aggatctgca aaaagcgagc aaacacgacc 240

agaggcaaag aagaggatag agagattgtg gagactgtta gagaactcga agaaatagga 300

aaaagatgat caagctgggt gttccacgtg aactcgtca gttccaaagt cccagatag 360

atcgttccct atttttgcca cattctttct ttcttttttc atttaattcc ccaaattctt 420

catgtttatt 430

<210> 85

<211> 101

<212> PRT

<213> Conus lynceus

<400> 85

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Ile Phe
 1 5 10 15

Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Thr Leu Thr
 20 25 30

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Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Gly Asp Asp Ala Lys Glu Arg
 50 55 60

Leu Thr Gln Thr Lys Arg Ile Arg Lys Lys Arg Ala Asn Thr Thr Arg
 65 70 75 80

Gly Lys Glu Glu Asp Arg Glu Ile Val Glu Thr Val Arg Glu Leu Glu
 85 90 95

Glu Ile Gly Lys Arg
 100

<210> 86

<211> 18

<212> PRT

<213> Conus lynceus

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residues 3, 4, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Gl

<400> 86

Gly Lys Xaa Xaa Asp Arg Xaa Ile Val Xaa Thr Val Arg Xaa Leu Xaa
 1 5 10 15

Xaa Ile

<210> 87

<211> 433

<212> DNA

<213> Conus lynceus

<400> 87

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatt 60

ctaggcacgg gcacactaga tcatggaggc gcaactgactg aacgccgttc gactgacgcc 120

atagcactga aacctgagcc tgtcctcctg cagaaatcct ctgccgcag caccgacgac 180

aatggcaacg acaggttgat tcagatgaag aggattctca aaaagcgagg aaacaaagcc 240

agaggcgaag aggaagttgc aaaaatggcg gcagagctta ccagagaaga agctgtaaag 300

gggaaatgat aatcaagttg ggtgttccac gtgacactcg tcagttctaa agtccccaga 360

tagatcggtc cctatttttg ccacattott tttttctatt ttcatttaatt tccccaaatc 420

tttcatgttt att 433

<210> 88

<211> 99

<212> PRT

<213> Conus lynceus

<400> 88

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe

1	5	10	15
His Leu Ile	Leu Gly Thr Gly Thr	Leu Asp His Gly Gly	Ala Leu Thr
	20	25	30
Glu Arg Arg	Ser Thr Asp Ala Ile	Ala Leu Lys Pro	Glu Pro Val Leu
	35	40	45
Leu Gln Lys	Ser Ser Ala Arg Ser Thr	Asp Asp Asn Gly Asn Asp	Arg
	50	55	60
Leu Ile Gln Met	Lys Arg Ile Leu Lys Lys	Arg Gly Asn Lys Arg	Glu
	65	70	75
Glu Glu Val	Ala Lys Met Ala Ala	Glu Leu Thr Arg Glu Glu	Ala Val
	85	90	95

Lys Gly Lys

<210> 89

<211> 19

<212> PRT

<213> Conus lynceus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 2, 3, 4, 11, 15 and 16 is Glu or gamma-carboxy-Gl

<400> 89

Gly Xaa Xaa Xaa Val	Ala Lys Met Ala Ala Xaa	Leu Thr Arg Xaa Xaa
1	5	10
		15

Ala Val Lys

<210> 90

<211> 433

<212> DNA

<213> Conus figulinus

<400> 90

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatac	60
ctaggcacgg gcacgctagg tcatggaggc gcaactgactg aacgccgttt ggctgacgcc	120
acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac	180
aatgacaagg acaggctgac ccagatgaag aggattttca aaaagcgagg aaacaaaggc	240
agaggcgagg aagaagttgc agagatggcg gcagagattg caagagaaaa tcaagcaaac	300
gggaaaagat aatcaaactg ggtgttcac gtgacactcg tcagttctaa agtccccaga	360
taggtcgttc tctatgtttg ccacattctt tctttttctt ttcatttaac tccccaaatc	420
tttcatgttt att	433

<210> 91

<211> 100

<212> PRT
 <213> Conus figulinus

<400> 91

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Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1           5           10           15

Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
          20           25           30

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
          35           40           45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg
          50           55           60

Leu Thr Gln Met Lys Arg Ile Phe Lys Lys Arg Gly Asn Lys Arg Glu
65           70           75           80

Glu Glu Val Ala Glu Met Ala Ala Glu Ile Ala Arg Glu Asn Gln Ala
          85           90           95

Asn Gly Lys Arg
          100
  
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<210> 92
 <211> 19
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 2, 3, 4, 7, 11 and 15 is Glu or gamma-carboxy-Glu

<400> 92

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Gly Xaa Xaa Xaa Val Ala Xaa Met Ala Ala Xaa Ile Ala Arg Xaa Asn
1           5           10           15
  
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Gln Ala Asn

<210> 93
 <211> 431
 <212> DNA
 <213> Conus figulinus

<400> 93

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gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatc      60
ctagggacgg gcacactagc tcatggaggc gcaccgactg aacgccgttt ggctgacacc      120
acagcactga aacccgagca tgtcctcctg cagatgtccg ctgcccgcag caccaacgat      180
aatggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacagcc      240
agaagctacg aacaagctag agaagttcag gaggctgtta atgaactcaa ggaaagaggt      300
aaaaagataa tcatgctggg tgttccacgt gacactcgtc agttctaaag cccccagata      360
gattgttccg tatttttacc acgttctttc tttctctttt cattttaattc cccaaatctt      420
  
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tcatgtttat t

431

<210> 94
 <211> 114
 <212> PRT
 <213> Conus figulinus

<400> 94
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Pro Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Thr Thr Ala Leu Lys Pro Glu His Val Leu
 35 40 45
 Leu Gln Met Ser Ala Ala Arg Ser Thr Asn Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Arg
 65 70 75 80
 Ser Tyr Glu Gln Ala Arg Glu Val Gln Glu Ala Val Asn Glu Leu Lys
 85 90 95
 Glu Arg Gly Lys Lys Ile Ile Met Leu Gly Val Pro Arg Asp Thr Arg
 100 105 110

Gln Phe

<210> 95
 <211> 18
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10, 14 and 17 is Glu or gamma-carboxy-Glu

<400> 95
 Ser Xaa Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
 1 5 10 15

Xaa Arg

<210> 96
 <211> 431
 <212> DNA
 <213> Conus figulinus

<400> 96
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatt 60
 ctaggggacgg gcacactagc tcatggaggc gcaccgactg aacgccgttt ggctgacacc 120

acagcactga aacccgagca tgtcctcctg cagatgtccg ctgcccgcag caccaacgat 180
aatggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacagcc 240
agaagctacg aacaagctag agaagttcag gaggctgtta atgaactcaa ggaaagaggt 300
aaaaagataa tcatgctggg tgttccacgt gacactcgtc agttctaaag ccccagata 360
gattgttccg tatttttacc acgttctttc tttctctttt catttaattc cccaaatctt 420
tcatgtttat t 431

<210> 97
<211> 114
<212> PRT
<213> Conus figulinus

<400> 97
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15
Tyr Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Pro Thr
20 25 30
Glu Arg Arg Leu Ala Asp Thr Thr Ala Leu Lys Pro Glu His Val Leu
35 40 45
Leu Gln Met Ser Ala Ala Arg Ser Thr Asn Asp Asn Gly Lys Asp Arg
50 55 60
Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Arg
65 70 75 80
Ser Tyr Glu Gln Ala Arg Glu Val Gln Glu Ala Val Asn Glu Leu Lys
85 90 95
Glu Arg Gly Lys Lys Ile Ile Met Leu Gly Val Pro Arg Asp Thr Arg
100 105 110

Gln Phe

<210> 98
<211> 34
<212> PRT
<213> Conus figulinus

<220>
<221> PEPTIDE
<222> (1)..(34)
<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10, 14 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 28 is Pro or hydroxy-Pro

<400> 98
Ser Xaa Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
1 5 10 15
Xaa Arg Gly Lys Lys Ile Ile Met Leu Gly Val Xaa Arg Asp Thr Arg
20 25 30

Gln Phe

<210> 99
 <211> 429
 <212> DNA
 <213> Conus figulinus

<400> 99
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagcgtt ccacctaata 60
 ctaggcacgg gcacactagc tcatggaggc gcaactggctg aacgccgttt ggctgacgcc 120
 acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 aatggcaagg acaggttgac tgagatgaag aggattctca aaaagcgagg aaacacggcc 240
 agagactacg aagatgatag agagattgca gagactgtta gagaactcga agaaataggt 300
 aaaagataat caagctgggt gttcaattga cactcatcag ttctaaagtc cccagataga 360
 tcgttcoccta attttgccac gttcttttctt tctcttttca ttttaattccc caaatctttc 420
 atgttttatt 429

<210> 100
 <211> 99
 <212> PRT
 <213> Conus figulinus

<400> 100
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Glu Arg
 20 25 30
 Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu Leu Gln
 35 40 45
 Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg Leu Thr
 50 55 60
 Glu Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg Asp Tyr
 65 70 75 80
 Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu Glu Ile
 85 90 95

Gly Lys Arg

<210> 101
 <211> 18
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-

sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu

<400> 101

Asp Xaa Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Xaa
1 5 10 15

Xaa Ile

<210> 102

<211> 419

<212> DNA

<213> Conus figulinus

<400> 102

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatac 60
ctaggcacgg gcacgctagg tcatggaggc gcaactgactg aacgccggtt ggctgacgcc 120
acagcgctga aacctgagcc tgcctcctg cagaaatccg ctgcccgag caccgacgac 180
aatggcaagg acaggttgac tcagatgaag gggactgtca aaaagcgagg aaacacggcc 240
gaagaagtta gagaggctgc agagactctt catgaactct cgctgtagga aaaagaaaaa 300
gattaatcaa gctgggtgtt ccacgtgaca ctcgtcagtt ctaaagtccc cagttcccta 360
tctttgccac gttttttctt tctcttttca tccaattccc caaatctttc atgtttatt 419

<210> 103

<211> 94

<212> PRT

<213> Conus figulinus

<400> 103

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
50 55 60

Leu Thr Gln Met Lys Gly Thr Val Lys Lys Arg Gly Asn Thr Ala Glu
65 70 75 80

Glu Val Arg Glu Ala Ala Glu Thr Leu His Glu Leu Ser Leu
85 90

<210> 104

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 5, 6, 9, 12 and 16 is Glu or gamma-carboxy-Glu

<400> 104

Gly Asn Thr Ala Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu His Xaa
1 5 10 15

Leu Ser Leu

<210> 105

<211> 427

<212> DNA

<213> Conus figulinus

<400> 105

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ctaggcacgg gcacactagg tcatggaggc gcactgactg aacgccgttt ggctgacgcc 120
acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgag caccgacgtc 180
aatggcaagg acaggttgac tgagatgaag aggattctca aaaagcgagg aagcatatcc 240
atgggcttcg aacatagaag agagattgca gagttgggta gagaactcgc tgaaataggt 300
aaacgataat caagctgggt gttccactaa cactcgtcag ttctaaagtc cccagataga 360
tcgttccta tctttgccac attttttttc tcttttcatt taattcccca aatctttcat 420
gtttatt 427

<210> 106

<211> 101

<212> PRT

<213> Conus figulinus

<400> 106

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Val Asn Gly Lys Asp Arg
50 55 60

Leu Thr Glu Met Lys Arg Ile Leu Lys Lys Arg Gly Ser Ile Ser Met
65 70 75 80

Gly Phe Glu His Arg Arg Glu Ile Ala Glu Leu Val Arg Glu Leu Ala
85 90 95

Glu Ile Gly Lys Arg
100

<210> 107

<211> 23

<212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(23)
 <223> Xaa at residues 8, 12, 15, 19 and 22 is Glu or gamma-carboxy-Glu

<400> 107
 Gly Ser Ile Ser Met Gly Phe Xaa His Arg Arg Xaa Ile Ala Xaa Leu
 1 5 10 15

Val Arg Xaa Leu Ala Xaa Ile
 20

<210> 108
 <211> 427
 <212> DNA
 <213> Conus distans

<400> 108
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 caaggcacgg gcacactagg ccatggaggc gcaactgactg aaggccgttc ggctgacgcc 120
 acagcgccga aacctgaacc tgtcctcctg cagaaatccg atgcccgcag cgccgacgac 180
 aacggcaagg acaagttgac tcagatgaag aggactctga aaaagcaagg acacattgcc 240
 agaaccataa ctgctgaaga ggcagagagg actagtgaag gaatgtcatc aatgggaaaa 300
 agataatcaa gctgggtgtt ccacgtgaca ctgctcagtt ctaaagtccc cagataaatc 360
 gttccctgtt ttgcccctgt tctttctttc tcttttcatt caattcccca aatctttcat 420
 gtttatt 427

<210> 109
 <211> 98
 <212> PRT
 <213> Conus distans

<400> 109
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Ala Phe
 1 5 10 15
 His Leu Ile Gln Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Gly Arg Ser Ala Asp Ala Thr Ala Pro Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Asp Ala Arg Ser Ala Asp Asp Asn Gly Lys Asp Lys
 50 55 60
 Leu Thr Gln Met Lys Arg Thr Leu Lys Lys Gln Gly His Ile Ala Arg
 65 70 75 80
 Thr Ile Thr Ala Glu Glu Ala Glu Arg Thr Ser Met Ser Ser Met Gly
 85 90 95

Lys Arg

<210> 110
 <211> 17
 <212> PRT
 <213> Conus distans

 <220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 5, 6, 8 and 12 is Glu or gamma-carboxy-Glu

<400> 110
 Thr Ile Thr Ala Xaa Xaa Ala Xaa Arg Thr Ser Xaa Arg Met Ser Ser
 1 5 10 15

Met

<210> 111
 <211> 415
 <212> DNA
 <213> Conus distans

 <400> 111
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 caaggaacgg gcacgctagg ccatggaggc gcaactgactg aaggccgttc ggctgacgcc 120
 acagcgccga aacctgaacc tgtgctcgtg cagaaatcgg atgcccgcag cgccgacgac 180
 aaccgcaagg acaagttgac tcagatgaag aggattctga aaaagcaaga aaccccaact 240
 cctgaagagg tagagcgcca taccgaaaga ctcaaaagca tgggaaaaag ataatcaagc 300
 tgggtgttcc acgtgacact cgtcagttct aaagtcccca gatggatcgt tccctgtttt 360
 tgcccgttc tttcgttctc ttttcattca attccccaaa tctttcatgt ttatt 415
 <210> 112
 <211> 96
 <212> PRT
 <213> Conus distans

<400> 112
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Ser Leu Val Ala Phe
 1 5 10 15

 His Leu Ile Gln Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30

 Glu Gly Arg Ser Ala Asp Ala Thr Ala Pro Lys Pro Glu Pro Val Leu
 35 40 45

 Val Gln Lys Ser Asp Ala Arg Ser Ala Asp Asp Asn Arg Lys Asp Lys
 50 55 60

 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Glu Thr Pro Thr Pro
 65 70 75 80

 Glu Glu Val Glu Arg His Thr Glu Arg Leu Lys Ser Met Gly Lys Arg

85

90

95

<210> 113
 <211> 19
 <212> PRT
 <213> Conus distans

 <220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 2, 4, 6, 7, 8, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 113
 Xaa Xaa Thr Xaa Thr Xaa Xaa Xaa Val Xaa Arg His Thr Xaa Arg Leu
 1 5 10 15

Lys Ser Met

<210> 114
 <211> 439
 <212> DNA
 <213> Conus purpurascens

<400> 114
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 ctaggcacgg gaatgctagc tcatggagac aactgactg aacgccgttc ggttgacgcc 120
 acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 aatgacaagg acaggttgac tcagatgaag aggattctca aaaagcgagg aaacaaagcc 240
 agaggcgaag aagaacattc caagtatcaa gagtgtotta gagaagtaag agtaaataag 300
 gtacaacaag aatgttaatc aagctgggtg ttccacgtga cactcgtcag ttctaaagtc 360
 cccagataga tcgttcccga tttttgccac attcttttctt tctctttttca ttttaattccc 420
 caaatctttc atgtttatt 439

<210> 115
 <211> 102
 <212> PRT
 <213> Conus purpurascens

<400> 115
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Met Leu Ala His Gly Asp Thr Leu Thr
 20 25 30
 Glu Arg Arg Ser Val Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu

65 70 75 80
 Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Val Arg Val Asn
 85 90 95

Lys Val Gln Gln Glu Cys
 100

<210> 116
 <211> 24
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
 Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr,
 O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 116
 Gly Xaa Xaa Xaa His Ser Lys Xaa Gln Xaa Cys Leu Arg Xaa Val Arg
 1 5 10 15

Val Asn Lys Val Gln Gln Xaa Cys
 20

<210> 117
 <211> 436
 <212> DNA
 <213> Conus purpurascens

<400> 117
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 ctaggcacgg gcacactagc tcatggaggc gcactgactg aacgcgggttc cactgacgcc 120
 acagcactga aacctgagcc tgtcctgcag gaatctgatg cccgcagcac cgacgacaat 180
 gacaaggaca ggttgactca gatgaagagg attctcaaaa agcgaggaaa caaagccaga 240
 ggccaagaag aacattccaa gtatcaggag tgtcttagag aagtaagagt aaataacgta 300
 caacaagaat gttaatacaag ctgggtgttc cactgacac tcgtcagttc taaagtcccc 360
 agatagatcg ttccctatatt ttgccacatt ctttctttct cttttcattt aattccccaa 420
 atctttcatg tttatt 436

<210> 118
 <211> 101
 <212> PRT
 <213> Conus purpurascens

<400> 118
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Val Pro Leu Val Thr Phe
 1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Leu Thr
 20 25 30

Glu Arg Gly Ser Thr Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45

Gln Glu Ser Asp Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg Leu
 50 55 60

Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu Glu
 65 70 75 80

Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Val Arg Val Asn Asn
 85 90 95

Val Gln Gln Glu Cys
 100

<210> 119

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
 Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr,
 O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 119

Gly Xaa Xaa Xaa His Ser Lys Xaa Gln Xaa Cys Leu Arg Xaa Val Arg
 1 5 10 15

Val Asn Asn Val Gln Gln Xaa Cys
 20

<210> 120

<211> 439

<212> DNA

<213> Conus purpurascens

<400> 120

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tgggtgacctt ccacctaatac 60
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acagcactga aacctgagcc tgtcctcctg cagaaatctg atgcccgcag caccgacgac 180

aatgacaagg acaggttgac tcagatgaag aggattctca aaaagcgagg aaacaaagcc 240

agaggcgaag aagaacattc caagtatcag gagtgtctta gagaaataag agtaaataag 300

gtacaacaag aatgttaatc aagctgggtg ttccacgtga caccgcgtcag ttctaaaagtc 360

cccagataga tcgttcccta tttttgccac attctttctt tctcttttca tttaattccc 420

caaatctttc atgtttatt 439

<210> 121

<211> 102

<212> PRT

<213> Conus purpurascens

<400> 121

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Ser Thr Gly Thr Leu Ala His Gly Gly Thr Leu Thr
20 25 30

Glu Arg Arg Ser Thr Asp Thr Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Asp Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg
50 55 60

Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu
65 70 75 80

Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Ile Arg Val Asn
85 90 95

Lys Val Gln Gln Glu Cys
100

<210> 122

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr,
O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 122

Gly Xaa Xaa Xaa His Ser Lys Xaa Gln Xaa Cys Leu Arg Xaa Ile Arg
1 5 10 15

Val Asn Lys Val Gln Gln Xaa Cys
20

<210> 123

<211> 439

<212> DNA

<213> Conus purpurascens

<400> 123

gogatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60
ctaagcacgg gcacactagc tcatggagac aactgactg aacgcggttc ggttgacgcc 120
acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
gatgacaagg acaggttgac tcagaggaag aggattctca aaaagcaagg aaacaaagcc 240
agaggcgaag cagaacatta cgcgtttcag gagtgtctta gagaaataaa tgtaaataag 300
gtacaacaag aatgttaatac aagctgggtg ttctacgtga cactcgtcag ttctaaagtc 360
cccagataga tcgttcacctt tttttgccac attctttctt tctcttttca ttttaattccc 420

caaatctttc atgtttatt

439

<210> 124
 <211> 102
 <212> PRT
 <213> Conus purpurascens

<400> 124
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Ser Thr Gly Thr Leu Ala His Gly Asp Thr Leu Thr
 20 25 30
 Glu Arg Arg Ser Val Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asp Lys Asp Arg
 50 55 60
 Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Gln Gly Asn Lys Arg Glu
 65 70 75 80
 Ala Glu His Tyr Ala Phe Gln Glu Cys Leu Arg Glu Ile Asn Val Asn
 85 90 95
 Lys Val Gln Gln Glu Cys
 100

<210> 125
 <211> 24
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa at residues 2, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
 Xaa at residue 6 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-
 sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 125
 Gly Xaa Ala Xaa His Xaa Ala Phe Gln Xaa Cys Leu Arg Xaa Ile Asn
 1 5 10 15
 Val Asn Lys Val Gln Gln Xaa Cys
 20

<210> 126
 <211> 421
 <212> DNA
 <213> Conus purpurascens

<400> 126
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60
 ctaggcacgg gaatgctagc tcatggagac aactgactg aacgccgttc ggttagacgcc 120
 acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgcc 180

aatggcaagg acaggttgac tcagaggaag aggattctca aaaagcgagg aaacatggcc 240
 aggggcttag aagaagatat agagtttatt gagacgatcg aagaaattgg aaaaagataa 300
 ccaagctggg tggtccacgt gacactcgtc ggttctaaag tcccagata gatcgttcac 360
 tatttttgcc acattctttc tttctctttt catttaattc cccaaatctt tcatgtttat 420
 t 421

<210> 127
 <211> 96
 <212> PRT
 <213> Conus purpurascens

<400> 127
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Met Leu Ala His Gly Asp Thr Leu Thr
 20 25 30
 Glu Arg Arg Ser Val Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Ala Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Leu
 65 70 75 80
 Glu Glu Asp Ile Glu Phe Ile Glu Thr Ile Glu Glu Ile Gly Lys Arg
 85 90 95

<210> 128
 <211> 15
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 4, 7, 10, 13 and 14 is Glu or gamma-carboxy-Glu

<400> 128
 Gly Leu Xaa Xaa Asp Ile Xaa Phe Ile Xaa Thr Ile Xaa Xaa Ile
 1 5 10 15

<210> 129
 <211> 418
 <212> DNA
 <213> Conus stercusmuscarum

<400> 129
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaate 60
 ctgggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc ggctgacgcc 120

acagcgctga aacctgagcc tgcctgcag aaatccgctg ccggcagcac cgacgacaac 180
 ggcaaggaca ggttgactca gatgaagagg attctcaaaa agcgaggaaa cacggctaga 240
 atcaccgaaa ctgatataga gcttggttatg aaattagaag aaattggaaa aagataatca 300
 agctgggtgt tccacgtgac actcgtcagt tctgaagtcg cgaggtagat cgttccttat 360
 ttttgccaca ttctttcttt ctcttttcat gtaattcccc aaatctttca tgtttatt 418

<210> 130
 <211> 97
 <212> PRT
 <213> Conus stercusmuscarum

<400> 130
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Gln Lys Ser Ala Ala Gly Ser Thr Asp Asp Asn Gly Lys Asp Arg Leu
 50 55 60
 Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg Ile
 65 70 75 80
 Thr Glu Thr Asp Ile Glu Leu Val Met Lys Leu Glu Glu Ile Gly Lys
 85 90 95

Arg

<210> 131
 <211> 15
 <212> PRT
 <213> Conus stercusmuscarum

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 7, 13 and 14 is Glu or gamma-carboxy-Glu
 <400> 131

Ile Thr Xaa Thr Asp Ile Xaa Leu Val Met Lys Leu Xaa Xaa Ile
 1 5 10 15

<210> 132
 <211> 17
 <212> PRT
 <213> Conus geographus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 132

Gly Glu Xaa Xaa Leu Gln Xaa Asn Gln Xaa Leu Ile Arg Xaa Lys Ser
 1 5 10 15

Asn

<210> 133
 <211> 24
 <212> PRT
 <213> Conus ammiralis

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 133

Glx Gly Gln Asp Asp Ser Glu Xaa Xaa Asp Ser Gln Lys Val Met Lys
 1 5 10 15

His Gly Gln Arg Arg Glu Arg Arg
 20

<210> 134
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 134

Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Leu Thr
 1 5 10 15

Pro

<210> 135
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 135

Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Pro

<210> 136
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 136

Asp Gly Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu Asn Xaa Leu Thr
 1 5 10 15

Pro

<210> 137
 <211> 18
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 137

Gly Tyr Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Glu
 1 5 10 15

Glu Ala

<210> 138
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 138

Gly Gly Gly Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Pro

<210> 139
 <211> 18
 <212> PRT
 <213> Conus bullatus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 139

Asn Pro Xaa Thr Tyr Ile Xaa Ile Val Xaa Ile Ser Arg Xaa Leu Glu
 1 5 10 15

Glu Ile

<210> 140
 <211> 20
 <212> PRT
 <213> Conus bullatus

<220>
 <221> PEPTIDE
 <222> (1)..(20)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 140
 Asn Pro Xaa Thr Tyr Tyr Asn Leu Xaa Leu Val Xaa Ile Ser Arg Glu
 1 5 10 15
 Leu Glu Glu Ile
 20

<210> 141
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 141
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Glu Arg Asn

<210> 142
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 142
 Gly Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Glu Arg Asp

<210> 143
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 143

Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Pro
 1 5 10 15

Glu Arg Asn

<210> 144
 <211> 17
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 144
 Ile Glu Xaa Gly Leu Ile Xaa Asp Leu Xaa Thr Ala Arg Xaa Arg Asp
 1 5 10 15

Ser

<210> 145
 <211> 15
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 145
 Ile Glu Xaa Gly Leu Ile Xaa Asp Leu Xaa Arg Xaa Arg Asp Ser
 1 5 10 15

<210> 146
 <211> 29
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(29)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 146
 Gly Glu Pro Xaa Val Gly Ser Ile Pro Xaa Ala Val Arg Gln Gln Glu
 1 5 10 15

Cys Ile Arg Asn Asn Asn Asn Arg Pro Trp Cys Pro Lys
 20 25

<210> 147
 <211> 17
 <212> PRT
 <213> Conus distans

<220>
 <221> PEPTIDE
 <222> (1)..(17)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 147

Thr	Ile	Thr	Ala	Xaa	Xaa	Ala	Xaa	Arg	Thr	Ser	Xaa	Arg	Met	Ser	Ser
1				5					10					15	

Met

<210> 148

<211> 19

<212> PRT

<213> Conus distans

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 148

Glx	Glu	Thr	Pro	Thr	Pro	Xaa	Xaa	Val	Xaa	Arg	His	Thr	Xaa	Arg	Leu
1				5					10					15	

Lys Ser Met

<210> 149

<211> 15

<212> PRT

<213> Conus episcopatus

<220>

<221> PEPTIDE

<222> (1)..(15)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 149

Gly	Gly	Lys	Asp	Ile	Val	Xaa	Thr	Ile	Thr	Xaa	Leu	Xaa	Lys	Ile
1				5					10					15

<210> 150

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 150

Gly	Glu	Xaa	Xaa	Val	Ala	Xaa	Met	Ala	Ala	Xaa	Ile	Ala	Arg	Xaa	Asn
1				5					10					15	

Gln Ala Asn

<210> 151

<211> 18

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 151
 Ser Tyr Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
 1 5 10 15

Glu Arg

<210> 152
 <211> 34
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(34)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 152
 Ser Tyr Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
 1 5 10 15

Glu Arg Gly Lys Lys Ile Ile Met Leu Gly Val Pro Arg Asp Thr Arg
 20 25 30

Gln Phe

<210> 153
 <211> 18
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 153
 Asp Tyr Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Glu
 1 5 10 15

Glu Ile

<210> 154
 <211> 19
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 154
 Gly Asn Thr Ala Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu His Glu
 1 5 10 15

Leu Ser Leu

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<210> 155
 <211> 23
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(23)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 155
 Gly Ser Ile Ser Met Gly Phe Xaa His Arg Arg Xaa Ile Ala Xaa Leu
 1 5 10 15
 Val Arg Glu Leu Ala Glu Ile
 20

<210> 156
 <211> 19
 <212> PRT
 <213> Conus lynceus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 156
 Gly Glu Xaa Xaa Val Ala Lys Met Ala Ala Xaa Ile Ala Arg Xaa Asn
 1 5 10 15
 Ala Ala Asn

<210> 157
 <211> 18
 <212> PRT
 <213> Conus lynceus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 157
 Gly Lys Xaa Xaa Asp Arg Xaa Ile Val Xaa Thr Val Arg Xaa Leu Glu
 1 5 10 15
 Glu Ile

<210> 158
 <211> 19
 <212> PRT
 <213> Conus lynceus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 158

Gly Glu Xaa Xaa Val Ala Lys Met Ala Ala Xaa Leu Thr Arg Xaa Glu
1 5 10 15

Ala Val Lys

<210> 159

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 159

Gly Glu Xaa Xaa His Ser Lys Tyr Gln Xaa Cys Leu Arg Xaa Val Arg
1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
20

<210> 160

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 160

Gly Glu Xaa Xaa His Ser Lys Tyr Gln Xaa Cys Leu Arg Xaa Val Arg
1 5 10 15

Val Asn Asn Val Gln Gln Glu Cys
20

<210> 161

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 161

Gly Glu Xaa Xaa His Ser Lys Tyr Gln Xaa Cys Leu Arg Xaa Ile Arg
1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
20

<210> 162

<211> 24

<212> PRT

<213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 162
 Gly Glu Ala Xaa His Tyr Ala Phe Gln Xaa Cys Leu Arg Xaa Ile Asn
 1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
 20

<210> 163
 <211> 15
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 163
 Gly Leu Xaa Xaa Asp Ile Xaa Phe Ile Xaa Thr Ile Xaa Glu Ile
 1 5 10 15

<210> 164
 <211> 15
 <212> PRT
 <213> Conus stercusmuscarum

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 164
 Ile Thr Xaa Thr Asp Ile Xaa Leu Val Met Lys Leu Xaa Glu Ile
 1 5 10 15

<210> 165
 <211> 24
 <212> PRT
 <213> Conus ammiralis

<400> 165
 Glx Gly Gln Asp Asp Ser Glu Glu Glu Asp Ser Gln Lys Val Met Lys
 1 5 10 15

His Gly Gln Arg Arg Glu Arg Arg
 20

<210> 166
 <211> 17
 <212> PRT
 <213> Conus betulinus

<400> 166
 Gly Gly Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Leu Thr

Pro

<400> 167
Gly Gly Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr
1 5 10 15

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<210> 168
<211> 17
<212> PRT
<213> Conus betulinus
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<400> 168
Asp Gly Glu Glu Val Arg Glu Ala Ala Glu Thr Leu Asn Glu Leu Thr
1 5 10 15

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<210> 169
<211> 18
<212> PRT
<213> Conus betulinus
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<400> 169
Gly Tyr Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu
1 5 10 15

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<210> 170
<211> 17
<212> PRT
<213> Conus betulinus
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<400> 170
Gly Gly Gly Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr
1 5 10 15

<210>	171
<211>	18
<212>	PRT
<213>	Conus bullatus

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<400> 171
Asn Pro Glu Thr Tyr Ile Glu Ile Val Glu Ile Ser Arg Glu Leu Glu
1           5           10           15
```

<210> 172

<211> 20
 <212> PRT
 <213> Conus bullatus

<400> 172
 Asn Pro Glu Thr Tyr Tyr Asn Leu Glu Leu Val Glu Ile Ser Arg Glu
 1 5 10 15
 Leu Glu Glu Ile
 20

<210> 173
 <211> 19
 <212> PRT
 <213> Conus catus

<400> 173
 Ser Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
 1 5 10 15

Glu Arg Asn

<210> 174
 <211> 19
 <212> PRT
 <213> Conus catus

<400> 174
 Gly Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
 1 5 10 15

Glu Arg Asp

<210> 175
 <211> 19
 <212> PRT
 <213> Conus catus

<400> 175
 Ser Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Pro
 1 5 10 15

Glu Arg Asn

<210> 176
 <211> 17
 <212> PRT
 <213> Conus catus

<400> 176
 Ile Glu Glu Gly Leu Ile Glu Asp Leu Glu Thr Ala Arg Glu Arg Asp
 1 5 10 15

Ser

<210> 177
 <211> 17
 <212> PRT
 <213> Conus catus

<400> 177

Ile Glu Glu Gly Leu Ile Glu Asp Leu Glu Ala Ala Arg Glu Arg Asp
 1 5 10 15

Ser

<210> 178

<211> 29

<212> PRT

<213> Conus catus

<400> 178

Gly Glu Pro Glu Val Gly Ser Ile Pro Glu Ala Val Arg Gln Gln Glu
 1 5 10 15

Cys Ile Arg Asn Asn Asn Asn Arg Pro Trp Cys Pro Lys
 20 25

<210> 179

<211> 15

<212> PRT

<213> Conus distans

<400> 179

Thr Ile Thr Ala Glu Glu Ala Glu Arg Thr Ser Met Ser Ser Met
 1 5 10 15

<210> 180

<211> 19

<212> PRT

<213> Conus distans

<400> 180

Glx Glu Thr Pro Thr Pro Glu Glu Val Glu Arg His Thr Glu Arg Leu
 1 5 10 15

Lys Ser Met

<210> 181

<211> 15

<212> PRT

<213> Conus episcopatus

<400> 181

Gly Gly Lys Asp Ile Val Glu Thr Ile Thr Glu Leu Glu Lys Ile
 1 5 10 15

<210> 182

<211> 19

<212> PRT

<213> Conus figulinus

<400> 182

Gly Glu Glu Glu Val Ala Glu Met Ala Ala Glu Ile Ala Arg Glu Asn
 1 5 10 15

Gln Ala Asn

<210> 183

<211> 18

<212> PRT
 <213> Conus figulinus

<400> 183
 Ser Tyr Glu Gln Ala Arg Glu Val Gln Glu Ala Val Asn Glu Leu Lys
 1 5 10 15

Glu Arg

<210> 184
 <211> 34
 <212> PRT
 <213> Conus figulinus

<400> 184
 Ser Tyr Glu Gln Ala Arg Glu Val Gln Glu Ala Val Asn Glu Leu Lys
 1 5 10 15

Glu Arg Gly Lys Lys Ile Ile Met Leu Gly Val Pro Arg Asp Thr Arg
 20 25 30

Gln Phe

<210> 185
 <211> 18
 <212> PRT
 <213> Conus figulinus

<400> 185
 Asp Tyr Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu
 1 5 10 15

Glu Ile

<210> 186
 <211> 19
 <212> PRT
 <213> Conus figulinus

<400> 186
 Gly Asn Thr Ala Glu Glu Val Arg Glu Ala Ala Glu Thr Leu His Glu
 1 5 10 15

Leu Ser Leu

<210> 187
 <211> 23
 <212> PRT
 <213> Conus figulinus

<400> 187
 Gly Ser Ile Ser Met Gly Phe Glu His Arg Arg Glu Ile Ala Glu Leu
 1 5 10 15

Val Arg Glu Leu Ala Glu Ile
 20

<210> 188
 <211> 19
 <212> PRT

<213> Conus lynceus

<400> 188

Gly Glu Glu Glu Val Ala Lys Met Ala Ala Glu Ile Ala Arg Glu Asn
1 5 10 15

Ala Ala Asn

<210> 189

<211> 18

<212> PRT

<213> Conus lynceus

<400> 189

Gly Lys Glu Glu Asp Arg Glu Ile Val Glu Thr Val Arg Glu Leu Glu
1 5 10 15

Glu Ile

<210> 190

<211> 19

<212> PRT

<213> Conus lynceus

<400> 190

Gly Glu Glu Glu Val Ala Lys Met Ala Ala Glu Leu Thr Arg Glu Glu
1 5 10 15

Ala Val Lys

<210> 191

<211> 24

<212> PRT

<213> Conus purpurascens

<400> 191

Gly Glu Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Val Arg
1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
20

<210> 192

<211> 24

<212> PRT

<213> Conus purpurascens

<400> 192

Gly Glu Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Val Arg
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